

Destruction of PCBs

Prior to about 1970, polychlorinated biphenyl, commonly referred to as PCB, was in widespread use as a dielectric fluid due to its special physical and chemical properties. Since then, PCBs have developed a notorious reputation due to their potential for environmental contamination and for their potential to react to form other, highly toxic substances. Under incomplete combustion, PCBs can form products such as furans and dioxins. Due also to the stability of PCB and its potential for environmental accumulation and harm, its use has not been permitted in new equipment since late 1960s in the United States.

Many different processes can and have been used to destroy PCBs, but each has its limitations and potential risks. High temperature incineration has been widely used, but has the inherent risk that if inadequate temperatures are attained at the point of destruction of the PCB, dioxins and furans can be formed.

PLASCON® units are used to treat both pure PCBs and oils contaminated with PCBs. PCBs are totally eliminated with a DRE that can exceed 99.9999%. A PLASCON® plant can destroy pure PCBs at a rate of 35 to 40kg/h, with no harmful emissions of dioxins or any other contaminants into the atmosphere. This is not high temperature incineration, but pyrolysis using a high temperature plasma arc in an inert, argon filled environment.

SRL Plasma can provide assistance with the establishment of a state-of-the art waste treatment facility, designed to safely and securely manage the elimination of PCB oil from obsolete electrical components. This includes advice on storage, extraction, decontamination of metals and of course, destruction of PCB using the PLASCON® unit.

BCD Technologies Ltd, a Queensland based waste destruction company, operates an EPA licensed, integrated hazardous waste treatment facility at Narangba and has been using a PLASCON® plant extensively in the destruction of PCBs for over 10 years.

In Japan, four Plascon plants have been in operation, safely eliminating PCBs.

In addition to the treatment of PCBs, PLASCON® units can be used to eliminate a wide range of concentrated organic pollutants such as pesticides.